

CLAIMS

What is claimed is:

5 1. A method of providing more vibrant, natural and long-lasting color to hair comprising carrying out the following sequential steps:

a) contacting the hair with a dye precursor mixture comprising:

10 i) a primary intermediate having a pKa in the range from about 3 to about 10 selected from the group consisting of the neutral or salt forms of para-phenylenediamine, derivatized para-phenylenediamines, para-aminophenol, substituted para aminophenols, 4,5 – diaminopyrazole, substituted 4,5 – diaminopyrazole, polyamino-pyrimidine, hydroxy-polyaminopyrimidine, and other substituted polyaminopyrimidine and mixtures thereof,

15 ii) an optional coupler having a pKa in the range from about 3 to about 10

wherein the pH of the precursor solution is selected such that less than 50% of the molecules comprising the primary intermediate and the coupler are in their anionic form
20 when they first contact the hair, and

b) contacting the hair with a developer mixture capable of inducing oxidation of primary intermediate and coupler in the precursor mixture that is in contact with the hair to form colored species,

25 wherein the dye precursor mixture remains in contact with the hair for a time period of from about 0.5 to 60 minutes before the hair is contacted with the developer and wherein the primary intermediate and coupler remain substantially inactive during this time period.

30

2. The method according to claim 1 wherein the dye precursor mixture produces a color change, ΔE , of at least about 0.15 units when measured by the In-Vitro Piedmont Color Retention Test.
- 5 3. The method according to claim 1 wherein the primary intermediate and the coupler is each present at a level of from about 0.1 Wt% to about 10 Wt% based on the total weight of the dye precursor mixture and the weight ratio of the primary intermediate to the coupler is in the range of from about 100 to about 0.01.
- 10 4. The method according to claim 1 wherein the dye precursor solution contains a nascent oxidizing compound.
5. The method according to claim 1 wherein the dye precursor mixture has a pH selected such that at least 50% of the molecules comprising the primary
15 intermediate and coupler are in their nonionic forms when contacting the hair in step a.
6. The method according to claim 1 further comprising applying to the hair an aligning and distributing means after the hair has been contacted with the dye precursor
20 mixture but before the hair is contacted with the developer mixture.
7. The method according to claim 6 wherein the aligning and distributing means is selected from the group consisting of a comb, a brush, a pick, an elongated element coupled in an open/close relationship, a towelette, a cloth, a sponge and a
25 combination of these implements.
8. The method according to claim 1 wherein the developer comprises an oxidizing agent selected from the group consisting of hydrogen peroxide, urea peroxide,
30 melamine peroxide, sodium perborate, sodium percarbonate and mixtures thereof.

9. The method according to claim 1 wherein the developer mixture comprises an alkaline pH control agent capable of activating the nascent oxidizing agents when present in the precursor mixture to induce oxidation of primary intermediate and coupler in the precursor mixture that is in contact with the hair to form colored species.

10. A kit for providing more vibrant, natural and long-lasting color to hair which comprises:

a) a dye precursor mixture comprising:

- i) a primary intermediate having a pKa in the range from about 3 to about 10 selected from the group consisting of the neutral or salt forms of para-phenylenediamine, derivatized para-phenylenediamines, para-aminophenol, substituted para aminophenols, 4,5 – diaminopyrazole, substituted 4,5 – diaminopyrazole, polyamino-pyrimidine, hydroxy-polyaminopyrimidine, and other substituted polyaminopyrimidine and mixtures thereof,
- iii) an optional coupler having a pKa in the range from about 3 to about 10

wherein the pH of the precursor solution is selected such that less than 50% of the molecules comprising the primary intermediate and the coupler are in their anionic forms when they first contact the hair, and

b) a developer mixture capable of inducing oxidation of the primary intermediate and coupler to form colored species.

11. The kit according to claim 10 further comprising an aligning and distributing means that contains at least one comb element or at least one brush element.

12. The kit according to claim 10 wherein the dye precursor mixture has a pH selected such that at least 50% of the molecules comprising the primary intermediate and coupler are in their nonionic forms.
- 5 13. The kit according to claim 10 further comprising written instructions that direct the user to first apply the dye precursor mixture to the hair, and, without rinsing, to then apply the developer solution to the hair after about 30 seconds to about 60 minutes from the time the dye precursor solution was applied.
- 10 14. The kit according to claim 10 further comprising conditioning agents, color sealant, damage control agents, and, hair benefit agents, perfumes, moisturizers and mixtures thereof, either packaged separately or as part of the dye precursor or developer compositions.